Honorable Thomas Dorr,
Undersecretary of Rural Development,
United States Department of Agriculture
Office of the Secretary
Washington, D.C. 20250

December 6, 2002

Subject:
Comments on Rural Business-Cooperative Service Forum on Expanding Rural Renewable Fuel Systems and specifically to the implementation of Section 9006 of the Farm Security and Rural Investment Act of 2002

Dear Mr. Dorr:

I am pleased to be able to give input on rural expanding renewable energy systems. It is important that we move forward in a well thought out, logical fashion to maximize the impact we can have on this emerging industry and I appreciate your efforts to make this happen. A reliable energy supply is crucial to the rural areas of this country and to our farming communities.

We are facing a changing landscape in rural America and we need public policy that will lead the way through these changes. A more diversified energy system is a critical part of that equation. I was very pleased with the initial reports I received on the direction you are taking with this project, striking a balance between grants and loans to support the innovative ideas of our agricultural producers. Energy efficiency and renewable energy generation are important parts of the rural economy both from the perspective of the energy they save or produce, and the rural jobs their implementation creates.

Vermont has been committed to the development of renewable energy sources and the efficient use of electricity for a number of years. A statewide efficiency program that works with power users to assist them in determining the areas they can best save energy is in place. The program helps users implement the technologies that make the most sense for them. My department has been involved with these programs and assisted farms in identifying the areas that were most beneficial for energy savings.

For the past several years we have partnered with the Vermont Public Service Department to do a program known as the Vermont Methane Pilot Program. This program first looked at the current state of anaerobic digester technology and the

strategic hurdles preventing its widespread adoption. We also looked at the potential resources available for digestion. If all of the dairy manure in Vermont were digested and the methane used to generate electricity, we could generate 28 megawatts of power. Vermont is fortunate in that it has one of the oldest operating digesters in the country at the Foster Brothers dairy farm in Middlebury Vermont. They have allowed us to reconfigure their system and conduct research to develop simpler, more efficient digester designs.

The hurdles we identified were:

- Marginal economics when looking at energy as the only payback
- Traditional designs only suitable for the largest dairy farms
- Complicated designs causing high maintenance
- Long retention times require large volume digestersGas quality lower than natural gas
- Sale to grid complicated with low prices paid for excess power
- Little existing service industry to design and maintain systems
- Societal benefits such as odor control and pathogen reduction have no hard dollar value
- Farmers are already working long days and have little time for new projects

We have resolved some of these issues. We have a workable net-metering law that will allow farms to aggregate their electrical meters and use the generated power to offset the energy charges on other meters on the farm buildings and houses. The electricity even can be used in buildings at different locations. We have redesigned the heating system to be more automatic. There are designs underway that will recapture the heat from the digester effluent to warm the incoming manure. We also are investigating using the excess heat from generation to dry solids to produce cattle bedding. It is an exciting time with a tremendous amount of innovative thinking taking place.

We are seeing a changing view of manure management in other areas as well. The year-round traditional manure spreading system has stopped in northern climates. The storage of manure was initially thought to be simple with storage lagoons. There is currently a lot of research and ideas being implemented that are changing the way we handle manure to reduce odors from pit agitation, and deal with transportation and other issues.

All of these factors are pointing to now as an excellent time to encourage new and innovative manure handling systems and anaerobic digesters will be a very important part of these changes. However, like any new technology, there are higher costs for the initial systems that make construction without subsidy unlikely. This is also happening at a time when milk prices are very low and dairy farms are strapped for cash. A program like the one you are developing is a critical link in the chain that will make renewable energy a reality. Without programs like this, the dairy industry will not be able to take advantage of new technologies and will lose out on the long-term benefits.

My staff is available to answer questions whenever we can be of help and I look forward to the Vermont Department of Agriculture, Food and Markets working with USDA on this endeavor. Attached are comments germane to the questions in your notice of hearing. These were prepared by Daniel Scruton from my department. He has been working most closely with energy issues and has worked with a number of farmers to help them develop designs for anaerobic digester systems. I hope these comments are useful to you and your staff as they move forward with the implementation of this portion of the Farm Bill.

Sincerely,

Leon C. Graves, Commissioner
Vermont Department of Agriculture, Food and Markets

Attached: Testimony of Daniel Scruton